DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-015417
Date Inspected: 02-Jul-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name:	Li Yang and Wu Zhi Cheng	**CWI Present:**	☑ Yes ☐ No
Inspected CWI report:	☐ Yes ☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes ☐ No ☐ N/A
Electrode to specification:	☑ Yes ☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes ☐ No ☐ N/A
Qualified Welders:	☑ Yes ☐ No ☐ N/A	**Verified Joint Fit-up:**	☐ Yes ☑ No ☐ N/A
Approved Drawings:	☑ Yes ☐ No ☐ N/A	**Approved WPS:**	☑ Yes ☐ No ☐ N/A
		Delayed / Cancelled:	☐ Yes ☑ No ☐ N/A

Bridge No: 34-0006
Component: OBG Trial Assembly

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector, S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Trial Assembly Areas

Cross Beam (CB) # 7)

This Quality Assurance (QA) Inspector witnessed final tension verification for Bolts connecting Cat-Walk for Cross Beam # 7. Inspected bolts tension on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00407 Dated July 02, 2010.

Bolt sizes used were M3/4" x 2 ¼" RC Set# DHGM200018 and final torque required was 347 N-m,

Manual Torque wrench was been used with Sr. No. X02-779.

Segment 8AW to 8BW (Corner Assembly)

This Quality Assurance (QA) Inspector witnessed final tension verification for Corner Assembly 8AW to 8BW between Panel Point (PP) 64, PP 65 and PP 66 for Segment 8AW to 8BW at Cross Beam and Counter Weight Side.

Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00406 Dated July 02, 2010.

Bolt sizes used were M22 x 55 RC Set# DHGM220044 and final torque required was 473 N-m.

Bolt sizes used were M22 x 85 RC Set# DHGM220098 and final torque required was 353 N-m.

Bolt sizes used were M22 x 85 RC Set# DHGM220104 and final torque required was 380 N-m.

Bolt sizes used were M22 x 120 RC Set# DHGM220051 and final torque required was 433 N-m.

Bolt sizes used were M24 x 60 RC Set# DHGM240014 and final torque required was 567 N-m.

Bolt sizes used were M24 x 65 RC Set# DHGM240009 and final torque required was 567 N-m.

Bolt sizes used were M24 x 80 RC Set# DHGM240011 and final torque required was 553 N-m.

Manual Torque wrench was been used with Sr. No. X0-666.

Segment 8CW (Corner Assembly)

This Quality Assurance (QA) Inspector witnessed final tension verification for Corner Assembly 8AW to 8BW between Panel Point (PP) 68 for Segment 8CW at Cross Beam and Counter Weight Side. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00406 Dated July 02, 2010.

Bolt sizes used were M22 x 55 RC Set# DHGM220044 and final torque required was 473 N-m.

Bolt sizes used were M22 x 85 RC Set# DHGM220098 and final torque required was 353 N-m.

Bolt sizes used were M22 x 85 RC Set# DHGM220104 and final torque required was 380 N-m.

Bolt sizes used were M22 x 120 RC Set# DHGM220051 and final torque required was 433 N-m.

Bolt sizes used were M24 x 60 RC Set# DHGM240014 and final torque required was 567 N-m.

Bolt sizes used were M24 x 65 RC Set# DHGM240009 and final torque required was 567 N-m.

Bolt sizes used were M24 x 80 RC Set# DHGM240011 and final torque required was 553 N-m.

Manual Torque wrench was been used with Sr. No. X0-666.

Traveler Rails at Bay # 1

This QA Inspector performed Dimension Control Inspection along with Caltrans QA Mr. Manikandan for the Traveler
Rail Bracket 21TR1-001; 21TR4-003 and 20TR1-030 at Bay # 1 measured and recorded the following.

Rail Length

Rail Longitudinal Elevation

Rail Sweep

Thickness at Section

Flange width at typical section

Flange width at Connection

Web to Flange Offset

Depth Section

Flange Tilt

The measured readings were recorded in the Dimension Control Form (DCP) and submitted to the Task Leader and Engineer for review.

Traveler Rails at Bay # 2

This QA Inspector performed Dimension Control Inspection along with Caltrans QA Mr. Manikandan for the Traveler Rail Bracket 20TR1-011 at Bay # 2 measured and recorded the following.

Rail Length

Rail Longitudinal Elevation

Rail Sweep

Thickness at Section

Flange width at typical section

Flange width at Connection

Web to Flange Offset

Depth Section

Flange Tilt

The measured readings were recorded in the Dimension Control Form (DCP) and submitted to the Task Leader and Engineer for review.

Segment 9BE

This QA Inspector observed welding by Flux Cored Arc Welding (FCAW) and Shielded Metal Arc Welding (SMAW) in progress of Complete Joint Penetration (CJP). The Weld joint is designated as Seg052A-021. The welder number is identified as 222396 and was observed welding in the 1G (Flat) and 4G (Overhead) position using approved Welding Procedure Specification WPS-B-T-2231T-1 and WPS-B-P-2214-B-U2-FCM-1. PMCK identified as Weld Connecting the Side Panel to Bottom Panel Cross Beam Side.

Segment 9BE

This QA Inspector observed welding by Flux Cored Arc Welding (FCAW) and Shielded Metal Arc Welding (SMAW) in progress of Complete Joint Penetration (CJP). The Weld joint is designated as Seg054A-013. The welder number is identified as 222396 and was observed welding in the 1G (Flat) and 4G (Overhead) position using approved Welding Procedure Specification WPS-B-T-2231T-1 and WPS-B-P-2214-B-U2-FCM-1. PMCK identified as Weld Connecting the Side Panel to Bottom Panel Cross Beam Side.

Segment 9CE

This QA Inspector observed welding by Flux Cored Arc Welding (FCAW) and Shielded Metal Arc Welding (SMAW) in progress of Complete Joint Penetration (CJP). The Weld joint is designated as Seg052A-045. The welder number is identified as 220066 and was observed welding in the 1G (Flat) and 4G (Overhead) position using approved Welding Procedure Specification WPS-B-T-2231T-1 and WPS-B-P-2214-B-U2-FCM-1. PMCK identified as Weld Connecting the Side Panel to Bottom Panel Bike Path Side. Please refer the pictures attached for more comprehensive details.

Segment 9BE

This QA Inspector observed welding by Flux Cored Arc Welding (FCAW) and Shielded Metal Arc Welding (SMAW) in progress of Complete Joint Penetration (CJP). The Weld joint is designated as Seg054A-014. The welder number is identified as 220066 and was observed welding in the 1G (Flat) and 4G (Overhead) position using approved Welding Procedure Specification WPS-B-T-2231T-1 and WPS-B-P-2214-B-U2-FCM-1. PMCK identified as Weld Connecting the Side Panel to Bottom Panel Bike Path Side. Please refer the pictures attached for more comprehensive details.

Segment 9BE to 9CE

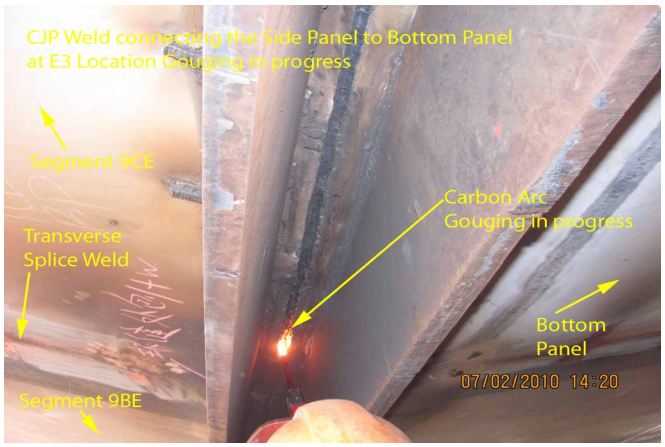
This QA Inspector observed welding by Flux Cored Arc Welding (FCAW) in progress of Complete Joint

Penetration (CJP). The Weld joint is designated as SP373-044~046. The welder number is identified as 222396 and was observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-2233-B-U2-F. PMCK identified as Side Panel Cross Beam Side T-Rib.

Segment 9BE to 9CE

This QA Inspector observed welding by Flux Cored Arc Welding (FCAW) in progress of Complete Joint Penetration (CJP). The Weld joint is designated as BP125-028~030. The welder number is identified as 222396 and was observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-2233-B-U2-F. PMCK identified as Bottom Panel T-Ribs.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

No relevant conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric T Sang 1500-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer